

# SEG Development & Production FORUM

## Unconventional Resources: Multiscale, Multidisciplinary Integration of Subsurface Data



**Banff, Canada  
15–19 July 2012**



**Society of Exploration Geophysicists**  
*The international society of applied geophysics*

### Development and Production Forum Unconventional Resources: Multiscale, Multidisciplinary Integration of Subsurface Data

#### Sunday, 15 July 2012

3–5..... Registration Open  
5:30–7..... Welcome Reception — Wildrose Prefunction Area

#### Monday, 16 July 2012

8:30–8:45..... Opening and Welcome, John Eastwood, Chairman

##### Session 1: Tight Liquids

**Session Chairs: John Eastwood and Mark Houston**  
8:45–9:15 ..... **The Value of Unconventional Reservoir Characterization**, Thomas L. Davis (Colorado School of Mines) *Keynote*  
9:15–9:45 ..... **An Integrated Workflow for the Exploration and Development of Unconventional Shale Reservoirs**, Chris Steinhoff and Heather Davey (Colorado School of Mines)  
9:45–10:15..... **Making Seismic Data More Relevant in Shale Resource Plays with Full Azimuth Angle Domain Imaging**, Zvi Koren (Paradigm)  
10:15–10:30 ... *Coffee Break*  
10:30–11..... **Interpretation of Wide-Azimuth AVAZ Data — An Eagle-Ford Shale Play Example**, Anat Canning (Paradigm)  
11–11:30..... **Seismic Reservoir Characterization for Exploration: Case Study from the Western Canadian Sedimentary Basin**, Damien Thenin (RPS Energy)  
11:30–12..... Discussion  
12–1:15..... *Group Lunch — Primrose Restaurant*

##### Session 2 — Oil Sands

**Session Chairs: Larry Lines and Björn Rommel**  
1:30–2..... **Anisotropic Data at Multiple Scales**, Terunhiko Hagiwara (Aramco Services Company) *Keynote*  
2–2:20..... **Poster Introductions by Presenters**  
**Reservoir Characterization: A Time-Lapse Seismic and Rock Physics Study in Heavy Oil**, Naimah Raizi (University of Calgary)  
**Integration of Seismic and Image Log Data for Oil Sands Reservoir Delineation**, Scott Hess (Statoil Canada Ltd.)  
**Integration of Geoscience Data Sets for Optimized Well Placement: Avoiding Muddy IHS at the Leismer Demonstration Project**, Thomas Greig and Howard Brekke (Statoil Canada)  
2:20–3:05..... **Poster Presenters to Poster Boards for Discussion with Participants**  
3:05–3:35..... Discussion  
6:30–8:30..... *Group Dinner — Hawthorne AB*

#### Tuesday, 17 July 2012

##### Session 3: Oil Sands

**Session Chairs: John Eastwood and Larry Lines**  
8:30–9..... **A SAGD Performance Indicator Derived from Well Logs and Seismic Data**, David Gray (Nexen) *Keynote*  
9–9:30..... **Reservoir Characterization for Enhanced Heavy Oil Production**, Larry Lines (University of Calgary)  
9:30–10..... **Shallow Reservoir Characterization — A Case Study in the Alberta Oil Sands**, Laurie Weston-Bellman (Sound QI)  
10–10:15..... *Coffee Break*  
10:15–10:45... **Gravity Gradiometry for 4D Delineation of Steam-Oil Interface in Enhanced Oil Recovery (EOR)**, Manik Talwani (Rice University)  
10:45–11:15... Discussion

##### Session 4: Borehole Geophysics

**Session Chairs: Michael Wilt and Pierre Thore**  
4:30–5..... **Toward Higher High Resolution Crosswell Seismic**, Thomas Morgan (Schlumberger DeepLook-CS)  
5–5:30..... **Poster Introductions by Presenters**  
**Hydraulic Fracture Monitoring: Attempts at Integrating Microseismic, Cross Well Tomography and Borehole Seismic**, Joel Le Calvez (Schlumberger)  
**Stimulated Gas Production Hindcast/ Forecast from Integrated Data — Vision or Mirage**, Mark Houston (VSFusion)  
**Surface to Borehole EM**, Michael Wilt (Schlumberger/EMI Technology Center)  
**Static and Dynamic Characterization of Acoustic Anisotropy of Shales**, Ronny Hofmann (Shell)  
**Production Logging Plus 3D Seismic Attributes to Characterize a Shale Play**, John Henry Alzate (University of Oklahoma)  
5:30–6:45..... **Poster Presenters to Poster Boards for Discussion with Participants (Refreshments available)**  
6:45–7:15..... Discussion

#### Wednesday, 18 July 2012

##### Session 5: Microseismic

**Session Chairs: Mark Houston and Tom Morgan**  
8:30–9..... **Microseismic Monitoring of Hydraulic Fractures: How Can We Optimize Production**, Shawn Maxwell (Schlumberger)  
9–9:30..... **Microseismic Elastic Full Waveform Inversion for Hydraulic Fracture Monitoring**, Alexander Drouninine (Shell Global Solutions International B.V.)  
9:30–10..... **Uncertainty in Microseismic Monitoring**, Rodney Johnston (BP)  
10–10:15..... *Coffee Break*  
10:15–10:45... **Pore Pressure Prediction using Anisotropic Velocities Case Study of Coastal Swamp Depobelt, Niger Delta**, Alexander Opara (Federal University of Technology)  
10:45–11:15... Discussion

##### Session 6: Tight Liquids

**Session Chairs: Tom Morgan and Pierre Thore**  
5–5:30..... **Modeling Stress Sensitivity of Shale Gas Reservoirs**, Christopher Skelt (Chevron Energy Technology Company)  
5:30–5:50..... **Poster Introductions by Presenters**  
**Anisotropy Measurements in a Multi-Faced Shale Sample by using Pulse Transmission Method**, Jaime Melendez Martinez (University of Alberta)  
**A Useful Tool for Shale Gas E/P — Get Density Anomaly from S-Zero Stack**, Keshan Zou (Schlumberger/WesternGeco)  
**Interdisciplinary Data Exchange in Fracture Treatment Monitoring**, Henry Bland (Halliburton/Pinnacle)  
5:50–6:35..... **Poster Presenters to Poster Boards for Discussion with Participants (Refreshments available)**  
6:35–7:05..... Discussion

#### Thursday, 19 July 2012

##### Session 7: Integration

**Session Chairs: John Eastwood and Michael Wilt**  
8:30–9..... **Integrated Asset Development and Optimization**, Matt Williams (Halliburton/Landmark)  
9–9:30..... **Shale Reservoir Characterization Integrating Seismic with Borehole and Measurements**, Niranjan Banik (Schlumberger/WesternGeco)  
9:30–10..... **Integration of Seismic Data into Assisted History Matching**, Pierre Thore (Total E&P UK)  
10–10:15..... *Coffee Break*  
10:15–10:45... **New Workflow of Multi-Scale Modeling and Upscaling from Core Plugs to Seismic Volumes**, Renjun Wen (Geomodeling Technology Corp.)  
10:45–11:15... **Integrated Fracture Analysis using 3D Seismic Attributes Tied to Production Data**, Robert Kidney (EOG Resources)  
11:15–11:45... **Integrated Seismic/Log/Core Multivariate Analysis for Unconventional Sweetspotting**, David Paddock (Schlumberger)  
11:45–12:15... Discussion  
12:15–1:50..... *Lunch-Primrose Restaurant*

##### Session 8 — Integration

**Session Chairs: Mark Houston and Björn Rommel**  
2–2:30..... **Poster Introductions by Presenters**  
**Exploring Unconventional Resources: Saudi Aramco Strategy**, Brian Gratto (Saudi Aramco)  
**The Montney Fm. Unconventional Gas Reservoir, Western Canada Sedimentary Basin**, Brad Robinson (Husky Energy)  
**Rock Physics Modeling and Geophysical Characterisation of Unconventional Reservoirs**, Enru Liu (ExxonMobil)  
**Fracture Detection Interpretation Beyond Conventional Approaches**, Clifford Kelly (IHS)  
**MaxG Basin Temperature Modeling**, Pete Dotsey (TGS)  
2:30–3:45..... **Poster Presenters to Poster Boards for Discussion with Participants (Refreshments available)**  
3:45–4:15..... Discussion

### Organizing Chairman

John Eastwood

### Sponsored by



**Society of Exploration Geophysicists**  
*The international society of applied geophysics*